

AMENDMENTS TO THE DRAWINGS

Figures 1A-1C are amended to include the label “Background Art.” No new matter is added.

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 16-18 and 20-31 are pending, with claims 16-18, 20-24 and 26-31 amended, and claim 19 cancelled without prejudice or disclaimer by the present amendment. Claims 16, 23, 29 and 31 are independent.

In the Official Action, the IDS of September 27, 2004 was objected to; the specification was objected to; claims 16, 18, 21-24 and 26-30 were objected to; claim 31 was rejected under 35 U.S.C. § 101; claims 16-28 and 31 were rejected under 35 U.S.C. § 112, second paragraph; claims 23 and 28-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nation (U.S. Patent No. 6,233,599); claim 31 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Nikhil (U.S. Patent No. 5,499,349); claims 16-22 and 24-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nation in view of Nikhil; and claims 16-22 and 24-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nation in view of Meyer (U.S. Patent. No. 7,640,315).

Regarding the IDS of September 27, 2004, Applicant's concurred that the SB 08 includes an informality. That is, the SB 08 includes an abbreviation of the assignee rather than the inventor's name re: U.S. Patent 6,212,630. A corrected SB 08 is attached hereto. Regarding the two JP references listed in the SB 08 of September 27, 2004, the Examiner indicated that copies of the two Japanese references were not provided. The two Japanese references were cited in an International Search Report in the PCT application that forms the basis of the present application. The WIPO should have sent copies of the two Japanese references to the USPTO.

To assist the Examiner, attached hereto are copies of the two Japanese references. In addition, for the Examiner's convenience, the two JP references are again listed in the SB 08 attached hereto. As set forth in the IDS filed on September 27, 2004, the two Japanese references were cited in an International Search Report issued in a counterpart application. The Search Report provides the necessary concise explanation to permit the Examiner to consider the Japanese references. Applicants request that the Examiner consider the 3 references listed in the attached SB 08.

Applicants traverse the objection to the specification because no grounds of objection were included in the Official Action.

Figures 1A-1C are amended to include the label "Background Art." No new matter is added.

Claim 31 is amended in response to the rejection under 35 U.S.C. § 101. Claims 16, 18, 21-24 and 26-30 are amended in response to the objections thereof. Claims 16-28 and 31 are amended in response to the rejection under 35 U.S.C. § 112, second paragraph. Claims 16, 23, 29 and 31 are amended to recite the features of now-cancelled claim 19, and to more clearly describe and distinctly claim Applicant's invention. Support for this amendment is found in Applicant's originally filed specification. No new matter is added.

In view of the incorporation of features related to claim 19 into claim 16, the rejection of claim 16 is moot. The following comments are directed to the rejection of now-cancelled claim 19. Briefly recapitulating, amended claim 16 is directed to

An N+1 parallel program module based on a single machine environment,
which comprises:

N+1 P-P branch programs module, where N is greater or equal to 1, which is run by operating the N+1 P-P branch programs which have an object code independent structures, in the way of time division, for making a transmission and consistency of P-P data under the supports of three classes of sequence-net instructions (or subroutines) for reading P-P data, writing P-P data, and making P-P data consistency in said P-P branch programs; and

a managing program module, for supporting suspension status, ready status, and running status of the P-P branch programs in response to information from the P-P branch programs,

wherein, the N+1th P-P branch programs module executes a P-P data sequence, which is represented by a data consistency operation.

Nation describes an apparatus and method for performing multithreaded operations which partitions an existing processor register set into register subsets, allocates the register subsets to a plurality of threads such that each thread has an associated register subset which stores that thread's resources (Nation: column 2, line 63 to column 3, line 4). Figure 1a of Nation shows a plurality of thread context planes 60 is controlled by the thread controller 50. That is, the sequence of the thread context is controlled by the thread controller which is equivalent to a parent controlling module. Therefore, Nation does not disclose or suggest a N+1 parallel program (P-P) branch programs module that is configured to execute an N+1th P-P branch program to process a P-P data sequence corresponding to a data consistency operation.

Nikhil describes a multithreaded parallel data processing system including at least one processing element for processing multiple threads of computation. The processing element 10 of Nikhil is capable of processing a plurality of threads of computation independently (Nikhil: column 3, line 21-22), preferably by executing a reduced instruction set (Nikhil: column 5, line 13-14) including the new control instructions such as fork, join, and start instructions (Nikhil: column 7, line 50-52). Therefore, the join instruction cited by the examiner joins together two threads, which means the processing element 10 joins together the two threads by executing a

join instruction. That is, the sequence of multiple threads is controlled by the processing element 10 which is equivalent to a parent controlling module. Therefore, Nikhil also does not disclose or suggest a N+1 parallel program (P-P) branch programs module that is configured to execute an N+1th P-P branch program to process a P-P data sequence corresponding to a data consistency operation.

As noted in Applicant's specification, "The N+1th branch program of P-P can do programming, controls, realization of call-permission-instruction of child P-P, and realization of the blending with P-P data sequence" (see page 17, line 23), which realizes "N+1 P-P is a structure supporting P-P's embedding" (see page 17, line 25), and "New structural resources have been developed by P-P and paralleled calls" (see page 30, line 24). The above technical features cannot be achieved with the teaching of Nation and Nikhil.

Applicant submits that independent claims 23, 29 and 31 patentably define over the applied references for reasons similar to those identified above relative to amended independent claim 16. As none of the cited art, individually or in combination, disclose or suggest at least the above-noted features of independent claims 16, 23, 29 and 31, Applicant submits the inventions defined by claims 16, 23, 29 and 31, and all claims depending therefrom, are not rendered obvious by the asserted references for at least the reasons stated above.

MPEP 2141 notes that prior art is not limited just to the references being applied, but includes the understanding of one of ordinary skill in the art. MPEP 2141 further notes that the prior art reference (or references when combined) need not teach or suggest all the claim limitations. However, an obviousness-type rejection must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art. MPEP 2141 goes on to list exemplary rationales that may support a conclusion of

obviousness. However, Applicant submits that the Official Action and the applied references present no objective evidence that would support an obviousness-type rejection of Applicant's amended claims based on one of these exemplary rationales.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Michael E. Monaco, Registration No. 52041 at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

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Respectfully submitted,

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